

WORKING WITH SCIENTISTS IN THE A.A.S. DIVISION FOR PLANETARY SCIENCES. Ellis D Miner, Co-Director for Science, NASA OSS Solar System Exploration E/PO Forum, Jet Propulsion Laboratory, m/s 230-260, 4800 Oak Grove Drive, Pasadena, CA 91109, ellis.d.miner@jpl.nasa.gov

INTRODUCTION

On page 15 of its 1996 publication, *Implementing the Office of Space Science Education / Public Outreach Strategy*, the NASA Office of Space Science states,

"Implementation of the OSS Education Outreach Strategy must involve the scientific participants in ways that: preserve OSS research goals; make a genuine contribution to education and the public understanding of science; permits scientists to continue to function as scientists; and make optimum use of their time and expertise . . .

"The strength of the OSS research community and the unique contribution that it can make to education and public outreach is based on the fact that it is a source of continuing new knowledge and new discoveries that can inform teachers at all levels and excite students and the public about science. Space scientists:

- "Are a living demonstration that science is a human endeavor carried out by real people of all kinds who have many different types of skill and who approach their science in many different ways;
- "Possess an enthusiasm for science and a way of looking at the world to try to understand why things work the way they do;
- "Have a presence in colleges and universities, research laboratories, and industry in communities across the country;
- "Can communicate and provide information on the latest exciting research results.

"Their contributions to education and outreach must draw on these attributes.

"But to be most effective, the limited time and resources of the scientific community must be highly leveraged and properly channeled." (p. 15)

In its role as an agent for NASA's Office of Space Science, the Solar System Exploration Education and Public Outreach Forum (SSE Forum) has attempted to establish a working relationship with the Division for Planetary Sciences of the American Astronomical Society (DPS) to assist DPS scientists to use their limited time and resources as effectively as possible in their E/PO efforts. Most DPS scientists already spend some fraction of their time in such efforts, often at their own expense, but frequently those efforts tend to be local in their reach and duplicative in their content.

The SSE Forum and seven regional 'Brokers/Facilitators' constitute a Support Network for

planetary scientists to help make connections between them and E/PO specialists who need their expertise and their data. The SSE Forum is located at

- NASA-JPL in Pasadena, CA (818-354-4450 or 818-393-7334; ellis.d.miner@jpl.nasa.gov or leslie.l.lowes@jpl.nasa.gov).

The seven regional brokers are located at

- Museum of Science, Boston, MA (617-589-0359; csneider@mos.org),
- College of Charleston, Charleston, SC (843-953-8279; cass@cofc.edu),
- Wheeling Jesuit University, Wheeling, WV (304-243-2388; nitin@cet.edu),
- De Paul University, Chicago, IL (773-325-1854; cnarasim@condor.depaul.edu),
- Lunar and Planetary Institute, Houston, TX (281-244-2014; johnson@lpi.usra.edu),
- Space Science Institute, Boulder, CO (303-492-7321; camorrow@colorado.edu), and
- University of Washington, Seattle, WA (206-543-0214; nasaerc@u.washington.edu).

DPS E/PO Survey

In order to effectively serve the planetary science community, it was important to get some measure of the current involvement of DPS scientists. A survey was designed to meet the needs of both the DPS Executive Committee and the OSS E/PO Support Network. Copies of the questionnaire were e-mailed to all DPS Members, posted on the DPS Web Site, and made available at DPS 2000. Results were collected between May and November 2000. Early results were presented as posters at DPS 2000 in Pasadena, CA.

There were 122 (of approximately 1200 members of the DPS) who responded to the questionnaire. The geographic distribution included 14 European scientists, 34 scientists from the eastern time zone, 11 from the central time zone, 34 from the mountain time zone, 26 from the Pacific time zone, and three from Hawaii. The respondents covered a wide range of scientific expertise, and almost all were already involved in some type of E/PO. Most often named specialties were planetary atmospheres (50), comparative planetology (48), planetary surfaces (47), planetary satellites (42), spectroscopy (39), solar system origin/evolution (38), physical properties of comets (37), physical properties of asteroids (30), and spacecraft instrumentation (29).

Almost all respondents were already involved in multiple kinds of public communication efforts. The

most frequently listed involvements included public lectures (87), media interviews (80), answering science questions for public or educators (77), informal education efforts (70), community clubs (64), writing articles for popular magazines (60), working with lawmakers to improve their science understanding (59), pre-college classroom activities or course work (58), post-high-school classroom activities or course work (53), and reviewing E/PO products for scientific accuracy (50). Interestingly, 49 responded that they would be interested in being part of a DPS Speakers' Bureau. Organization of a DPS Speakers' Bureau is now underway.

Of the 122 respondents, only 24 indicated that they did not want to have help from the OSS E/PO Support Network, 38 indicated a desire to have such assistance, and the remaining 60 were undecided. It is the SSE Forum's intent to work with the 38 and provide additional information to the 60. Eventually, we would like to provide the names of interested scientists to the relevant regional brokers, who will act as filters to assure that requests for scientist time and expertise are kept within whatever bounds are set by the scientist, but will provide many opportunities for E/PO partnering.

PRESENCE AT ANNUAL MEETINGS

The SSE Forum set up a large booth adjacent to the DPS 2000 registration desk and provided information on the available services in the registration packets. There were also several education session posters by members of the Support Network. A video depicting DPS scientists' involvement in E/PO was distributed to all participants at DPS NASA Night. NASA OSS Associate Administrator Edward Weiler praised the Support Network and its efforts in his address at NASA Night. The video and other help and contact information were subsequently distributed via CD-ROM to all DPS members. Support Network personnel were also instrumental in helping to facilitate a luncheon to discuss how scientists can effectively work with planetaria and in a Planetary-Society-sponsored student press conference on the final day of the DPS meeting.

Although not as extensive, similar efforts were carried out at DPS 2001 and are planned for future DPS meetings. Efforts will be adjusted to meet the mutual needs of the DPS scientists and potential E/PO partners.

WORKING BEHIND THE SCENES

The author, who presently serves as DPS Press Officer, has worked with Dr. Larry Lebofsky (DPS Education and Public Outreach Officer) and other members of the DPS Executive Committee to make it easier for DPS members to become more effectively involved in E/PO efforts. Several Support Network

personnel who are also DPS members have joined with Lebofsky and others in the Solar System Exploration Decadel Study support. The DPS Committee has agreed to waive DPS membership requirements for E/PO poster presentations by Support Network personnel (and others) on a case-by-case basis as recommended by the Press Officer or the E/PO Officer. Education posters are exempt from the DPS rule limiting authors to one paper at each meeting so that research scientists can report on their scientific results *and* on their E/PO 'findings.' NASA has made substantial improvements in the NRA E/PO proposal process based on DPS member feedback through the SSE Forum, and attempts are being made to provide alternative means of funding good E/PO projects through NASA and other sources. Support Network personnel at the Space Science Institute in Boulder have constructed a 'Menu of Opportunities for Scientists In Education' (MOSIE) to make it simpler for planetary scientists and other space scientists to be effectively involved in E/PO. Very soon an on-line journal will permit members of the American Astronomical Society and others to publish refereed E/PO papers. The Support Network will continue to be committed to providing as much help as limited funding will permit.

SUMMARY

Planetary scientists represent an invaluable resource for information on and understanding of the solar system for all aspects of public communication. Yet most scientists have little time, funding, or connections to enable them to use that expertise. The OSS E/PO Support Network, with its theme-based forums and regional brokers/facilitators, is already well equipped to assist scientists, non-intrusively, to establish partnerships with those who need their scientific expertise. Such partners also often possess the funding and know-how to build effective public communication programs, activities, and products, resources that scientists alone often cannot easily access. The result of such E/PO partnerships is often a mutually satisfying symbiosis of talents that enables scientists to make much more effective use of their limited time and resources to accomplish grand E/PO designs.

REFERENCE

Space Science for the 21st Century: The Space Science Enterprise Strategic Plan, National Aeronautics and Space Administration, August 1995.

BIOGRAPHY FOR ELLIS MINER

The lead author received his PhD in Physics and Astronomy from Brigham Young University in 1965 and has been a practicing space scientist at JPL since that time. He was a member of science teams on Mariners 7, 8, and 9 to Mars, Mariner 10 to Venus and Mercury, and Vikings 1 and 2 to Mars. He then served for 12 years as Assistant Project Scientist for the Voyager Missions to Jupiter, Saturn, Uranus and Neptune and has since authored books on Uranus and Neptune. He is presently Science Advisor for the Cassini Mission to Saturn, due to insert into Saturn orbit on July 1, 2004. Since 1999, he has co-directed the SSE Forum. He is active in various E/PO efforts, including consulting on a large number of children's books and articles about space. He has given more than 400 public talks on the space program, including several that were televised nationwide. He is a charter member of the A.A.S. Division for Planetary Sciences (since 1969) and presently serves as its Press Officer.